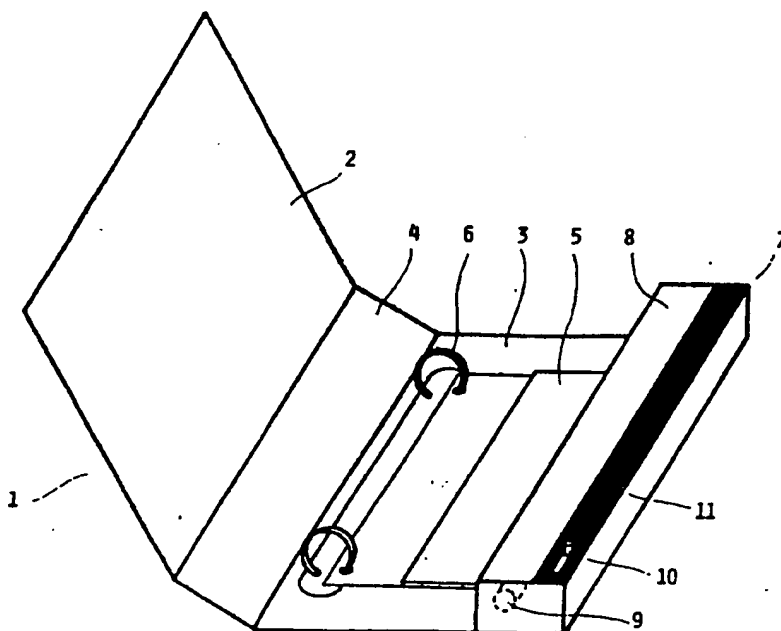




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(54) Title:</b> A STORAGE AND FILING MEANS FOR PHOTOGRAPHIC FILMS   |           |   |

**(57) Abstract**

A binder for the storage and filing of photographic films or the like, i.e. a negative file, which binder comprises cover board parts (2, 3, 4) foldable towards each other, and thereto attached means (6) for fastening film strip pockets (5). At least one cover board part (3) or a separate board comprises means for facilitating the viewing of the films, preferably a lit light box (7) with a light diffusing viewing plane (8).



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## A storage and filing means for photographic films

The invention relates to a binder for the storage and filing of photographic films or the like, which binder comprises cover boards foldable towards each other like the covers of a book, and annular fastening means attached to one cover board, for the attaching of loose film pockets holding film strips to be filed, which strips for the viewing thereof are detached from said film pockets.

The filing of films constitutes a problem in the photographic field, and in particular among amateur photographers, because the original film, such as a negative or a transparent film, must be stored in such a manner, that it will remain undamaged and so, that additional copies can be taken. On the other hand, the later use requires a flat film form, and requires also, that each film can be easily found even in large film archives.

The film negatives or transparencies are usually cut into sized portions stored in planar form. This storage method is favorable, since keeping the film flat for later viewing and copying is a suitable solution with respect to the aspect of preserving the film.

The prior art comprises film pocket assemblies for the storage of photographic films cut into portions, such pockets comprising elongated film pockets of a transparent material and attached to each other in a side-by-side relation. In such a case the viewing of an individual film strip is fairly easy, because the whole film pocket assembly can be lifted in a spread out condition against a window or other light source. The detachment, however, of an individual film strip from the film pocket, as well as inserting it back into place is difficult. The storage of such film pocket assemblies also poses problems, because said assemblies cannot be placed e.g. into vertical disposition in accordance with normal storage methods.



Covered binders for the keeping of negatives and transparencies are also known, which can be placed into a shelf preferably in a book-like manner. Such a film binder preferably comprises loose pockets for the film strips, and said loose pockets are fastened one upon the other into the binder using conventional loop fastening means. In such pockets the film material is preserved rather well and the handling of each film strip is easy and protective for the film material, because the individual film strip portions belonging to the same film usually are loose in the film pockets or are placed into an open simply folded protective paper.

One problem with such film pocket has, however, still remained, while the viewing of the pictures requires that the film strip must be detached from the film pocket and placed into a separate viewing device. In such cases the common practice is, that the viewer in one operation takes all the film strips to be viewed out of the different storage pockets, and takes the whole bundle to a viewing device, e.g. to a light source. As an alternative the light source is moved adjacent to the filing binders, where it will disturb the work. In both cases there is a considerable risk, that the individual film strip portions will be mixed up and will get into the wrong storage pocket, which will lead to disorder and in worst cases to a disintegration of the whole filing system.

In order to solve the problems arising with the use of prior known storage devices for photographic films, the storage and filing binder according to the invention has been developed, the characterizing features of which are disclosed in the attached claims. For a device according to the invention it is accordingly characteristic, that at least one cover board part comprises means for facilitating the viewing of pictures. Said means facilitating the viewing constitute a viewing device, which to its function is integrally connected to the film binder, said viewing device having a viewing plane for the inspection of any



individual film strip brought against it. The inspection of individual pictures or picture series can thus be accomplished as a continuous operation so, that each film strip is viewed immediately against a facilitating device. Each film strip is picked out of its storage pocket separately only for the time of viewing and without removing said strip from the immediate vicinity of the corresponding storage pocket. When the binder comprises several film pockets fastened one upon the other in the same fastening loops, the specific storage pocket for the film being viewed is always at hand during the viewing, so that no mixing up can occur. For the next viewing another storage pocket is turned up so, that this pocket is topmost immediately adjacent to the viewing device. Due to the invention a safer maintenance of order is achieved and at the same time the actual viewing and after-use of the films is facilitated.

In the simplest embodiment of the invention the back cover board of the storage and filing binder comprises a partly transparent portion or a brightly light reflecting portion, respectively, against which portion the film to be viewed is laid. As one fairly simple embodiment may be mentioned a viewing plane, which is coated with a light-coloured after-glowing paint.

A preferred embodiment of the invention comprises a light box having a partly light diffusing viewing plane, a light source, an energy source and a light switch. In the following the invention will be disclosed more in detail with reference to the enclosed figure disclosing the preferred embodiment mentioned above.

The binder 1 of the embodiment disclosed in the figure thus comprises a back piece 4 besides cover boards 2, 3, which are foldable against each other. In the depicted embodiment fastening loops 6 for the film pockets 5 are attached to one of the covers boards 3. According to the invention viewing facilitating means are attached to the binders. In the described embodiment said means comprise a viewing device using actively



produced light, i.e. a light box 7 having, besides a partly transparent viewing plane, also a light source 9.

In the light box 7 according to the figure the viewing plane 8 proper is preferably light diffusing, whereby the light emitted from at the simplest one spotlike light source 9 will be distributed as evenly as possible. The light source 9 is preferably formed by a series of incandescent lamps or light emitting diodes drawing power from a battery not shown. An alternative light source comprises a discharge lamp. In the preferred embodiment shown the viewing plane is further extended with a blackened non-transparent portion 11, so that the actual exposure proper will fall only on the picture portion of the film strip to be viewed, and will not disturb the clarity of any text portion possibly connected with the film strip.

A light box drawing power from a separate battery preferably also comprises a switch 10, which in one embodiment is arranged so, that the light goes on when the cover is opened and goes out when the cover is closed, respectively.

In the shown embodiment of the invention the light box 7 is essentially integrated with one cover board 3 of the binder, but the scope of the invention covers also an embodiment, where the viewing device 7 is attached to a separate support board, which like a film pocket will be fastened to the fastening loops 6. In such a case the viewing device can be detached from the binder and can be used independently, or e.g. in the connection with a plurality of conventional binders.

The scope of the invention further comprises an embodiment, where the viewing device further comprises fastening means for the film strips. With such fastening means the film strip to be viewed can be attached to the viewing plane, whereby the whole binder arrangement can be hung on the wall, e.g. using hangers in the other cover board. In this case the film pockets hanging from the fastening loops will hold the film strips to be stored,



while the individual strip to be viewed will press against the viewing plane in a position which is pleasant for the user.

As a special advantage of the invention it may be mentioned, that the light box 7 attached to the binder is always at hand in the actual place of use, where it has an advantageous situation with respect to the viewing. A common light box placed on a separate board will again normally be situated in the most relevant binder or e.g. the one being prepared. Since the light box 7 is relatively fixedly attached to the binder or to a correspondingly large board the device will remain steadily in place. Thus the light box 7 itself can be made as small as possible, without impairing its function.



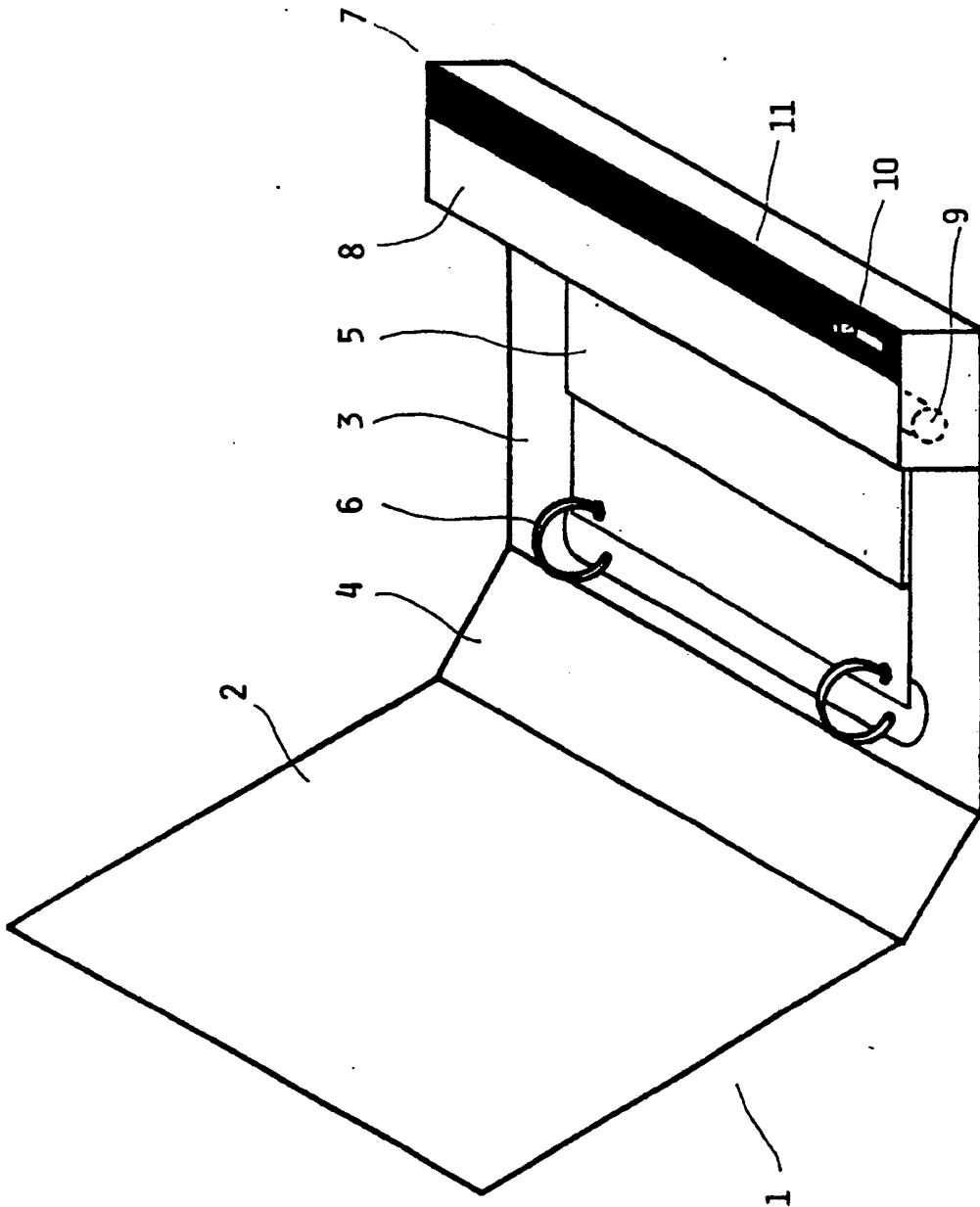
Claims

1. A binder for the storage and filing of photographic films or the like, which binder (1) comprises cover board parts (2, 3, 4) foldable towards each other like the covers of a book, and an annular fastening means (6) attached to one cover board (3), for the attaching of loose film pockets (5) holding film strips to be filed, which strips for the viewing thereof are detached from said film pockets (5), characterized in, that a viewing device (7) is fixedly attached in an integrated manner to one cover board part (3) or to a separate support board detachably connected to said fastening means (6), said viewing device comprising a viewing plane (8) for the inspection of any individual film strip being pressed against said plane (8).
2. A storage or filing means according to claim 1, characterized by the viewing plane (8) of the viewing device (7) being transparent, whereby thereto preferably is attached an illuminating means (9).
3. A storage or filing means according to claim 2, characterized in, that the viewing device comprises a light box (7) with a viewing plane (8) partly diffusing the light, a light source (9), a power source and a light switch (10).
4. A storage or filing means according to claim 1, characterized by the viewing device comprising an after-glowing plane.
5. A storage or filing means according to any one of the claims 1...4, characterized by the viewing device (7) further comprising fastening means for individual picture strips to be inspected.



6. A storage or filing means according to any one of the claims 1...5, characterized in, that the viewing plane (8) of the viewing device (7) is limited by a dark and/or non-transparent portion (11).







# INTERNATIONAL SEARCH REPORT

International Application No. PCT/FI88/00133

| <b>I. CLASSIFICATION OF SUBJECT MATTER</b> (If several classification symbols apply, indicate all) *<br>According to International Patent Classification (IPC) or to both National Classification and IPC 4<br>G 02 B 27/02, B 42 F 13/40  |   |                         |   |  |                         |   |   |                                 |                       |   |   |
|--|---|-------------------------|---|--|-------------------------|---|---|---------------------------------|-----------------------|---|---|
| <b>II. FIELDS SEARCHED</b><br><div style="text-align: center; font-size: small;">Minimum Documentation Searched †</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%; text-align: left; padding: 2px;">Classification System</th> <th style="text-align: left; padding: 2px;">Classification Symbols</th> </tr> <tr> <td style="padding: 2px;">IPC 4<br/>US C1</td> <td style="padding: 2px;">B 42 D 3/00, /12, /18; B 42 F 13/40; G 02 B 27/00, /02, /18<br/>40:361-367; 281:1,29; 402:3, 4, 80</td> </tr> </table> <div style="text-align: center; font-size: x-small; margin-top: 5px;">Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched ‡</div> <p style="margin-top: 10px;">SE, NO, DK, FI classes as above</p>   |   |                         | Classification System                                     | Classification Symbols   | IPC 4<br>US C1          | B 42 D 3/00, /12, /18; B 42 F 13/40; G 02 B 27/00, /02, /18<br>40:361-367; 281:1,29; 402:3, 4, 80 |   |                                 |                       |   |   |
| Classification System  | Classification Symbols  |                         |   |  |                         |   |   |                                 |                       |   |   |
| IPC 4<br>US C1   | B 42 D 3/00, /12, /18; B 42 F 13/40; G 02 B 27/00, /02, /18<br>40:361-367; 281:1,29; 402:3, 4, 80 |                         |   |  |                         |   |   |                                 |                       |   |   |
| <b>III. DOCUMENTS CONSIDERED TO BE RELEVANT †</b><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%; text-align: left; padding: 2px;">Category *</th> <th style="text-align: left; padding: 2px;">Citation of Document, † with indication, where appropriate, of the relevant passages ‡</th> <th style="width: 10%; text-align: left; padding: 2px;">Relevant to Claim No. ‡</th> </tr> <tr> <td style="text-align: center; vertical-align: top; padding: 5px;">X</td> <td style="padding: 5px;">GB, A, 1 161 130(WILLIAM CROOKES)<br/>13 August 1969<br/>See the whole document</td> <td style="text-align: center; vertical-align: top; padding: 5px;">1-3</td> </tr> <tr> <td style="text-align: center; vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4 426 798(SAUNDERS ET AL)<br/>24 January 1984<br/>See the whole document</td> <td style="text-align: center; vertical-align: top; padding: 5px;">1</td> </tr> </table>   |   |                         | Category *  | Citation of Document, † with indication, where appropriate, of the relevant passages ‡ | Relevant to Claim No. ‡ | X   | GB, A, 1 161 130(WILLIAM CROOKES)<br>13 August 1969<br>See the whole document | 1-3                             | A                     | US, A, 4 426 798(SAUNDERS ET AL)<br>24 January 1984<br>See the whole document | 1 |
| Category *   | Citation of Document, † with indication, where appropriate, of the relevant passages ‡            | Relevant to Claim No. ‡ |   |  |                         |   |   |                                 |                       |   |   |
| X  | GB, A, 1 161 130(WILLIAM CROOKES)<br>13 August 1969<br>See the whole document                     | 1-3                     |   |  |                         |   |   |                                 |                       |   |   |
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| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="font-size: x-small;">* Special categories of cited documents: ‡</p> <p style="font-size: x-small;">"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p style="font-size: x-small;">"E" earlier document but published on or after the international filing date</p> <p style="font-size: x-small;">"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p style="font-size: x-small;">"O" document referring to an oral disclosure, use, exhibition or other means</p> <p style="font-size: x-small;">"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p style="font-size: x-small;">"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p style="font-size: x-small;">"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p style="font-size: x-small;">"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p style="font-size: x-small;">"A" document member of the same patent family</p> </div> </div> |   |                         |   |  |                         |   |   |                                 |                       |   |   |
| <b>IV. CERTIFICATION</b><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Date of the Actual Completion of the International Search</td> <td style="width: 50%; padding: 2px;">Date of Mailing of this International Search Report</td> </tr> <tr> <td style="padding: 2px;">1988-11-04</td> <td style="padding: 2px;">1988 -11- 16</td> </tr> <tr> <td style="padding: 2px;">International Searching Authority</td> <td style="padding: 2px;">Signature of Authorized Officer</td> </tr> <tr> <td style="padding: 2px;">Swedish Patent Office</td> <td style="padding: 2px;">Peter Norberg <i>Peter Norberg</i></td> </tr> </table>   |   |                         | Date of the Actual Completion of the International Search | Date of Mailing of this International Search Report                                    | 1988-11-04              | 1988 -11- 16  | International Searching Authority   | Signature of Authorized Officer | Swedish Patent Office | Peter Norberg <i>Peter Norberg</i>  |   |
| Date of the Actual Completion of the International Search  | Date of Mailing of this International Search Report   |                         |   |  |                         |   |   |                                 |                       |   |   |
| 1988-11-04   | 1988 -11- 16  |                         |   |  |                         |   |   |                                 |                       |   |   |
| International Searching Authority  | Signature of Authorized Officer   |                         |   |  |                         |   |   |                                 |                       |   |   |
| Swedish Patent Office  | Peter Norberg <i>Peter Norberg</i>  |                         |   |  |                         |   |   |                                 |                       |   |   |

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